



“Toxic” Terminology

BACKGROUND:	A number of terms (e.g., “toxic chemicals,” “toxic pollutants,” “toxic waste,” and similar nomenclature) refer to substances that are subject to regulation under one or more federal environmental laws. State laws and regulations also provide additional, similar, or identical terminology that may be confused with the federally defined terms. Many of these terms appear synonymous, and it is easy to use them interchangeably. However, in a regulatory context, inappropriate use of narrowly defined terms can lead to confusion about the substances referred to, the statutory provisions that may apply, and the regulatory requirements for compliance under the applicable federal statutes. This Information Brief provides regulatory definitions, a brief discussion of compliance requirements, and references for the precise terminology that should be used when referring to “toxic” substances regulated under federal environmental laws. A companion CERCLA Information Brief (EH-231-003/0191) addresses “hazardous” nomenclature.
STATUTES:	Clean Water Act (CWA), Sects. 307 & 502(13); Title III, Superfund Amendments and Reauthorization Act (SARA), Sect. 313(d)(2); Resource Conservation and Recovery Act (RCRA); Clean Air Act (CAA); and Toxic Substances Control Act (TSCA).
REGULATIONS:	40 CFR 401.15; 40 CFR 261.30(b).
REFERENCE	DOE Environmental Guidance Program Reference Book on RCRA, CERCLA, CWA, CAA, and TSCA; “Toxic Chemicals Subject to Section 313 of the Emergency Planning and Community-Right-To-Know Act of 1986” (Senate Committee Print No. 99-169); “Chemical Emergency Preparedness Program Interim Guidance” (EPA-560/7-85-013).

What is a “toxic chemical”?

A toxic chemical is a chemical that can cause acute health or significant adverse environmental impacts; therefore, its manufacture, processing, or use and any continuous or recurring releases from a facility must be reported under Title III of SARA.

Section 313 of SARA, which is entitled “Toxic Chemical Release Forms,” requires owners or operators of certain facilities to report annually to the EPA Administrator and State officials the manufacture, processing, or use of toxic chemicals in amounts exceeding threshold quantities. The toxic chemicals initially covered by this requirement are over 300 chemicals listed in Committee Print Number 99-169 of the Senate Committee on Environment and Public Works, entitled “Toxic Chemicals Subject to Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986” [Sect. 313(c)]. In addition, the EPA Administrator was granted authority under SARA to add the following chemicals to the list:

- ☐ any chemical known to cause (or reasonably anticipated to cause) significant adverse acute human health effects at concentration levels likely to exist beyond facility site boundaries as a result of continuous, or frequently recurring, releases;
- ☐ any chemical known to cause (or reasonably anticipated to cause) either

- ☐ cancer or teratogenic effects or
- ☐ serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic mutations, or other chronic health effects; or
- ☐ any chemical known to cause (or reasonably anticipated to cause) — because of its toxicity, persistence in the environment, or tendency to bioaccumulate — a significant adverse effect on the environment.

What is a “toxic pollutant”?

A toxic pollutant is any pollutant that when discharged into waters of the United States could directly or indirectly cause adverse effects or death to aquatic organisms or man, and therefore, is subject to pretreatment standards and effluent limitations.

Section 307 of the CWA, entitled “Toxic and Pretreatment Effluent Standards,” established a list of 65 toxic pollutants that are subject to pretreatment standards and effluent limitations when discharged into waters of the United States from point sources. Under the CWA, all facilities discharging pollutants into waters of the United States are required to obtain and comply with a National Pollutant Discharge Elimination System (NPDES) permit. Permits establish

pretreatment standards and effluent limitations based on pollutants in the discharge stream, uses of the receiving water body, the type of facility, and “the best available technology economically achievable” for an applicable category or class of point sources.

The list of toxic pollutants, which is found at 40 CFR 401.15, contains the same pollutants listed in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives. Toxic pollutants are defined in Sect. 502(13) of the CWA as “those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offsprings.” The term “pollutant” is broadly defined under the CWA [Sect. 502(6)] as “dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.” However, pollutants do not include sewage from vessels or materials injected into a well and subject to the Underground Injection Control (UIC) provisions of the Safe Drinking Water Act.

All of toxic pollutants are also CERCLA hazardous substances.

What is an “acutely toxic chemical”?

Acutely toxic chemicals are the forerunners of SARA Title III extremely hazardous substances; however, the term “acutely toxic chemical” is not formally defined under any statute.

In 1985 as Congress prepared to re-authorize CERCLA, EPA compiled a list of 402 acutely toxic chemicals in a document entitled, “Chemical Emergency Preparedness Program Interim Guidance” (EPA-560/7-85-013). The guidance document addressed emergency responses to accidental releases of these chemicals, and the information presented in the document was presented in a format similar to the Occupational Safety and Health Administration’s (OSHA) recommended format for a material safety data sheet (MSDS). This list of acutely toxic chemicals was reprinted along with threshold planning quantities (TPQs) (quantities that triggered reporting to the State Emergency Response Commission) and reportable quantities (RQs) (quantities that triggered reporting to the National Response Center) in a November 17, 1986, *Federal Register* notice (51 FR 41570)

establishing notification requirements under Sects. 302 and 304 of Title III of SARA.

What is a “toxic substance”?

Although the term “toxic substance” is in the title of the Toxic Substances Control Act (TSCA), it is not formally defined.

TSCA gives EPA the authority to regulate chemical substances and mixtures whose manufacture, processing, distribution in commerce, use or disposal may present an unreasonable risk of injury to health or the environment. Section 3(2) of TSCA defines “chemical substance” to mean any organic or inorganic substance whether it is man-made or naturally occurring. Exemptions are provided for pesticides; tobacco and tobacco products; source, special nuclear, or byproduct material regulated under the Atomic Energy Act (AEA); and food, food additives, drugs, and cosmetics. However, there is no list of toxic substances provided by TSCA.

What is a “toxic waste”?

A toxic waste is a RCRA hazardous waste that is listed as hazardous because of its toxic properties; however, this term is often used indiscriminately (and incorrectly) by the media or public to refer to any waste, chemical, or substance subject to environmental laws.

In RCRA’s implementing regulations at 40 CFR 261, Subpart D, two of the waste codes used in the lists of wastes at 40 CFR 261.31 and 261.32 are “toxic waste” (T) and waste that exhibits the toxicity characteristic. Appendix VII to 40 CFR 261 identifies the specific constituents that caused EPA to list a waste as Toxic Waste (T) or waste that exhibits the toxicity characteristic.

What is an “air toxic”?

An air toxic is synonymous with a “hazardous air pollutant.”

The term “air toxic” was used to identify Title III of Senate version of the Clean Air Act reauthorization bill; however, the term is not formally defined in the Clean Air Act.

Questions of policy or questions requiring policy decisions will not be dealt with in EH-231 Information Briefs unless that policy has already been established through appropriate documentation. Please refer any questions concerning the subject material covered in this Information Brief to Jane Powers, RCRA/CERCLA Division, EH-231, 202-586-7301.